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Subject: Need a vector generalization procedure in ENVI

Posted by [wl2776](#) on Mon, 19 Apr 2004 07:54:10 GMT

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Hi all.

I have a file with vector polygons.

The vertex coordinates are in map projection (stereographic in my case).

I convert this file to the format of ESRI Shapefile. Vectors in this format can have a set of attributes.

I need to write to the attribute a mean value of image pixels surrounded by the polygon.

I create a ROI, transfer map coordinates to the image pixel coordinates using `envi_convert_file_coordinates`, assign these image pixel coordinates to the ROI, then use `envi_get_roi_data` to get array of pixel values.

But `envi_get_roi_data` returns the error: "Not enough valid and unique points specified".

The reason is: the sample polygon has 4 vertices and surrounds 2 pixels.

After transferring map coordinates to image coordinates I get the arrays looking like following: `xpts=[3155, 3156, 3156, 3155, 3155]`, `ypts=[24, 24, 26, 26, 24]`

As far as I can understand, `Envi_get_roi_data` needs the arrays like `xpts=[3155,3155]`, `ypts=[24, 25]`

Could anyone advise me some algorithm to transform a polygon from map coordinates to image coordinates?

The polygons can be of various form, not only rectangular, but small in size.

I tried search in help systems of both IDL and EnVI, but didn't find anything.

Thanks in advance.

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